



US009636639B2

(12) **United States Patent**
Ansari et al.

(10) **Patent No.:** **US 9,636,639 B2**

(45) **Date of Patent:** **May 2, 2017**

(54) **POROUS METALLIC MEMBRANE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/654,768**

(22) PCT Filed: **Dec. 23, 2013**

(86) PCT No.: **PCT/SG2013/000546**

§ 371 (c)(1),

(2) Date: **Jun. 22, 2015**

(87) PCT Pub. No.: **WO2014/098774**

PCT Pub. Date: **Jun. 26, 2014**

(65) **Prior Publication Data**

US 2015/0343390 A1 Dec. 3, 2015

(30) **Foreign Application Priority Data**

Dec. 21, 2012 (SG) 201209493-4

(51) **Int. Cl.**

B01D 39/00 (2006.01)

B01D 39/14 (2006.01)

(Continued)

(52) **U.S. Cl.**

CPC **B01D 71/022** (2013.01); **B01D 53/228** (2013.01); **B01D 61/025** (2013.01);

(Continued)

(58) **Field of Classification Search**

CPC **B01D 71/022**; **B01D 67/0062**; **B01D 61/025**; **B01D 61/145**; **B01D 53/228**

See application file for complete search history.

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(57) **ABSTRACT**

The present disclosure relates to a method of forming a metallic layer having pores extending therethrough, the method comprising the steps of: (a) contacting a cathode substrate with an electrolyte solution comprising at least one cation; reducing the cation to deposit the metallic layer on a surface of the cathode substrate; and (c) generating a plurality of non-conductive regions on the cathode substrate surface during reducing step (b); wherein the deposition of the metallic layer is substantially prevented on the non-conductive regions on the cathode substrate surface to thereby form pores extending through the deposited metallic layer. The present disclosure further provides a metallic porous membrane fabricated by the disclosed process.

13 Claims, 10 Drawing Sheets

